

ABSTRACT OF THE DISCLOSURE

A test apparatus is provided which includes a substrate retainer, a probe card, a tester, a test head, and a main controller. The substrate retainer is for holding a substrate having a plurality of chips. The probe card has an array of probes aligned in rows and columns, and each of the probes is for contacting respective chips of the substrate held by the retainer and each includes a plurality of probe needles. The tester conducts a test routine by generating test signals and by receiving and analyzing return signals, and the test head is for sending the test signals from the tester to the probe card, and for sending the return signals from the probe card to the tester. The main controller includes a test result database for storing test data analyzed by the tester, and for executing a cleaning error detection program to determine whether the test data contains cleaning errors resulting from a lack of cleanliness of the probe needles of the probes.